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MEAN WELL

SWITCHING POWER SUPPLY

ISO-9001 CERTIFIED MANUFACTURER

QP-150 SERIES

Jameco Part Number 213647 (QP-150F)

.LOW COST, HIGH RELIABILITY
.105°C OUTPUT CAPACITOR
.INTERNATIONAL AC INPUT RANGE
.HIGH EFFICIENCY, LOW WORKING TEMPERATURE
.SOFT-START CIRCUIT, LIMITING AC SURGE CURRENT
.SHORT CIRCUIT, OVERLOAD, OVER VOLTAGE PROTECTED
.CH4:±POLARITY IS SELECTABLE

MODEL / SPECIFICATION	QP-150-3A				QP-150-3B				QP-150-3C			
	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
DC OUTPUT VOLTAGE	5V	3.3V	12V	-5V	5V	3.3V	12V	-12V	5V	3.3V	15V	-15V
OUTPUT V. TOLERANCE	±3%	±3%	±6%	±5%	±3%	±3%	±6%	±5%	±3%	±3%	+8, -6%	±5%
OUTPUT RATED CURRENT	10A	10A	5A	0.6A	10A	10A	5A	0.6A	10A	10A	4A	0.6A
OUTPUT CURRENT RANGE	3-15A	0-15A	0.4-5A	0-1A	3-15A	0-15A	0.4-5A	0-1A	3-15A	0-15A	0.4-5A	0-1A
RIPPLE & NOISE (p-p)	100mV	100mV	150mV	150mV	100mV	100mV	150mV	150mV	100mV	100mV	150mV	150mV
LINE REGULATION	±1%	±1%	±2%	±1%	±1%	±1%	±2%	±1%	±1%	±1%	±2%	±1%
LOAD REGULATION	±2%	±2%	±6%	±2%	±2%	±2%	±6%	±2%	±2%	±2%	±6%	±2%
MAX. OUTPUT POWER	146W				150.2W				152W			
EFFICIENCY	73%				75%				74%			
DC VOLTAGE ADJ.	CH1,2:+10,-5%											
INPUT VOLTAGE RANGE	90~264VAC 47~63Hz; 120~370VDC											
AC CURRENT	2.5A/115V 1.2A/230V											
INRUSH CURRENT	COLD START<=45A/230V											
LEAKAGE CURRENT	<3.5mA/240VAC											
OVERLOAD PROTECTION	105%~150% RESET:AUTO RECOVERY											
OVER VOLTAGE PROTECTION	CH1:5.75~6.75V CH2:3.8~4.4V TYPE:SHUTDOWN RESET:RE POWER ON											
OVER TEMP.PROTECTION(OPTION)	95°C±5°C TSW1 TYPE:SHUTDOWN RESET:AUTO RECOVERY											
TEMP. COEFFICIENT	±0.03% / °C (0~50°C)											
SETUP, RISE, HOLD UP TIME	800ms, 50ms, 16ms / 115, 230VAC											
POWER FACTOR	PF>0.95/230VAC, PF>0.98/115VAC											
VIBRATION	10~500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES											
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC											
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:500VDC / 100M Ohms											
WORKING TEMP., HUMIDITY	-10°C~+60°C(REFER TO OUTPUT DERATING CURVE), 20%~90% RH											
STORAGE TEMP., HUMIDITY	-20°C~+85°C, 10%~95% RH											
DIMENSION	199*99*50mm (L*W*H) CASE:916B											
WEIGHT	800gs											
SAFETY STANDARDS	UL1950, TUV EN60950 APPROVED											
EMC STANDARDS	EN55022 CLASS B, EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61000-3-2,-3, EN55024 VERIFICATION											

NOTE :
1.ALL PARAMETERS ARE SPECIFIED AT 230VAC INPUT, RATED LOAD, 25°C 70% RH. AMBIENT.
2.TOLERANCE GINCLUDE SET UP TOLERANCE, LINE REGULATION, LOAD REGULATION.
3.RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR.
4.LINE REGULATION IS MEASURED FROM LOW LINE TO HIGH LINE AT RATED LOAD.
5.LOAD REGULATION IS MEASURED FROM 20% TO 100% RATED LOAD, AND OTHER OUTPUT AT 60% RATED LOAD.
6.EACH OUTPUT PROVIDE UP TO MAXIMUM CURRENT, BUT TOTAL LOAD CAN NOT EXCEED MAX. OUTPUT POWER.

2002-07-11

NEXT (MECHANICAL INFO)

MEAN WELL

SWITCHING POWER SUPPLY

ISO-9001 CERTIFIED MANUFACTURER

QP-150 SERIES

.LOW COST, HIGH RELIABILITY
.105°C OUTPUT CAPACITOR
.INTERNATIONAL AC INPUT RANGE
.HIGH EFFICIENCY, LOW WORKING TEMPERATURE
.SOFT-START CIRCUIT, LIMITING AC SURGE CURRENT
.SHORT CIRCUIT, OVERLOAD, OVER VOLTAGE PROTECTED
.CH4:±POLARITY IS SELECTABLE

MODEL / SPECIFICATION	QP-150-3D				QP-150D				QP-150F			
	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
DC OUTPUT VOLTAGE	5V	3.3V	24V	-12V	5V	12V	24V	-12V	5V	15V	24V	-15V
OUTPUT V. TOLERANCE	±3%	±3%	±6%	±5%	±3%	±3%	±6%	±5%	±3%	±3%	±6%	±5%
OUTPUT RATED CURRENT	10A	10A	2.5A	0.6A	10A	4A	2A	0.6A	10A	3A	2A	0.6A
OUTPUT CURRENT RANGE	3-15A	0-15A	0.3-3A	0-1A	3-15A	0-5A	0.4-3A	0-1A	3-15A	0-5A	0.4-3A	0-1A
RIPPLE & NOISE (p-p)	100mV	100mV	150mV	150mV	120mV	150mV	200mV	150mV	120mV	150mV	200mV	150mV
LINE REGULATION	±1%	±1%	±2%	±1%	±1%	±1%	±2%	±1%	±1%	±1%	±2%	±1%
LOAD REGULATION	±2%	±2%	±6%	±2%	±2%	±2%	±6%	±2%	±2%	±2%	±6%	±2%
MAX. OUTPUT POWER	150.2W				150.2W				152W			
EFFICIENCY	76%				78%				78%			
DC VOLTAGE ADJ.	CH1,2:+10,-5%											
INPUT VOLTAGE RANGE	90~264VAC 47~63Hz; 120~370VDC											
AC CURRENT	2.5A/115V 1.2A/230V											
INRUSH CURRENT	COLD START<=45A/230V											
LEAKAGE CURRENT	<3.5mA/240VAC											
OVERLOAD PROTECTION	105%~150% RESET:AUTO RECOVERY											
OVER VOLTAGE PROTECTION	CH1:5.75~6.75V CH2:3.8~4.4V				CH1:5.75~6.75V CH2:13.8~16.2V				CH1:5.75~6.75V CH2:17.25~20.25V			
	TYPE:SHUTDOWN RESET:RE POWER ON											
OVER TEMP.PROTECTION(OPTION)	95°C±5°C TSW1 TYPE:SHUTDOWN RESET:AUTO RECOVERY											
TEMP. COEFFICIENT	±0.03% / °C (0~50°C)											
SETUP, RISE, HOLD UP TIME	800ms, 50ms, 16ms / 115,230VAC											
POWER FACTOR	PF>0.95/230VAC, PF>0.98/115VAC											
VIBRATION	10~500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES											
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC											
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:500VDC / 100M Ohms											
WORKING TEMP., HUMIDITY	-10°C~+60°C(REFER TO OUTPUT DERATING CURVE), 20%~90% RH											
STORAGE TEMP., HUMIDITY	-20°C~+85°C, 10%~95% RH											
DIMENSION	199*99*50mm (L*W*H) CASE:916B											
WEIGHT	800gs											
SAFETY STANDARDS	UL1950, TUV EN60950 APPROVED											
EMC STANDARDS	EN55022 CLASS B, EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61000-3-2,-3, EN55024 VERIFICATION											

NOTE :
1.ALL PARAMETERS ARE SPECIFIED AT 230VAC INPUT, RATED LOAD, 25°C 70% RH. AMBIENT.
2.TOLERANCE GINCLUDE SET UP TOLERANCE, LINE REGULATION, LOAD REGULATION.
3.RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR.
4.LINE REGULATION IS MEASURED FROM LOW LINE TO HIGH LINE AT RATED LOAD.
5.LOAD REGULATION IS MEASURED FROM 20% TO 100% RATED LOAD, AND OTHER OUTPUT AT 60% RATED LOAD.
6.EACH OUTPUT PROVIDE UP TO MAXIMUM CURRENT, BUT TOTAL LOAD CAN NOT EXCEED MAX. OUTPUT POWER.

2002-07-11

MEAN WELL

SWITCHING POWER SUPPLY

ISO-9001 CERTIFIED MANUFACTURER

QP-150 SERIES

.BUILD-IN PFC FUNCTION
.UNIVERSAL AC INPUT-FULL RANGE
.SHORT CIRCUIT, OVERLOAD, OVER VOLTAGE PROTECTED
.OVER TEMP.PROTECTION(OPTION)
.SOFT-START CIRCUIT, LIMITING AC SURGE CURRENT
.FORCE AIR COOLING BY BUILD-IN DC FAN

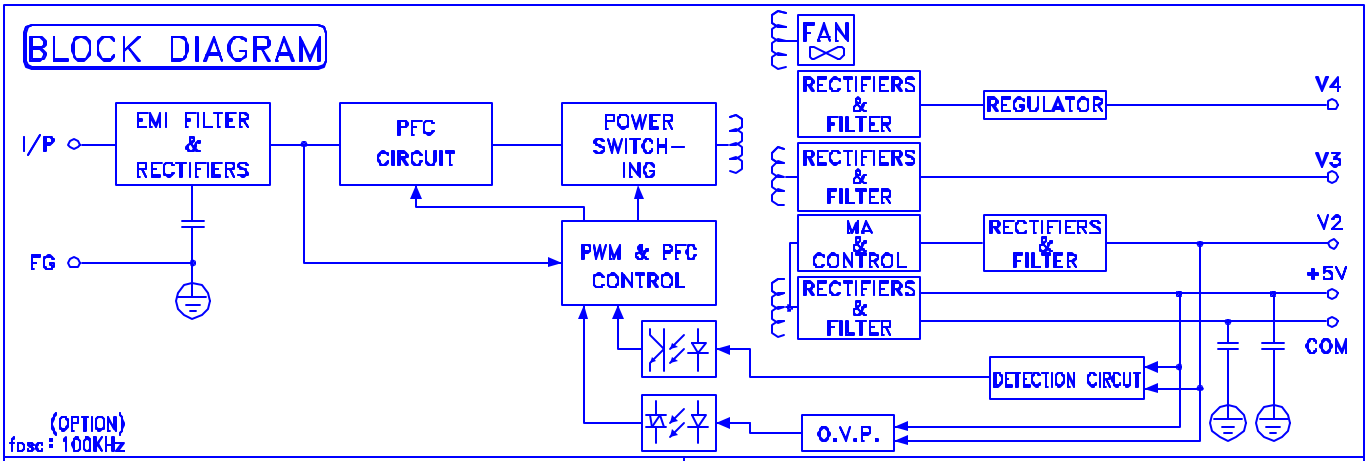
MODEL / SPECIFICATION	QP-150B				QP-150C			
	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
DC OUTPUT VOLTAGE	5V	12V	-12V	-5V	5V	15V	-15V	-5V
OUTPUT V. TOLERANCE	±3%	±6%	+10,-6%	±5%	±3%	+6,-10%	±8%	±5%
OUTPUT RATED CURRENT	15A	4A	2A	0.6A	15A	3A	2A	0.6A
OUTPUT CURRENT RANGE	3-15A	0.4-5A	0.3-2A	0-1A	3-15A	0.4-4A	0.3-2A	0-1A
RIPPLE & NOISE (Vp-p)	100m	150m	150m	100m	100m	150m	150m	100m
LINE REGULATION	±1%	±2%	±2%	±1%	±1%	±2%	±2%	±1%
LOAD REGULATION	±2%	±6%	±6%	±2%	±2%	±6%	±6%	±2%
DC OUTPUT POWER	150W				153W			
EFFICIENCY	76%				77%			
DC VOLTAGE ADJ.	CH1:+10,-5%							
INPUT VOLTAGE RANGE	90~264VAC 47~63Hz; 127~370VDC							
AC CURRENT	3A/115V 1.5A/230V							
INRUSH CURRENT	COLD START <=40A							
LEAKAGE CURRENT	<3.5mA/240VAC							
OVERLOAD PROTECTION	105%~135% RESET:AUTO RECOVERY							
OVER VOLTAGE PROTECTION	CH1:5.75~6.75V							
OVER TEMP.PROTECTION(OPTION)	95°C±5°C TSW1 TYPE:SHUTDOWN RESET:AUTO RECOVERY							
TEMP. COEFFICIENT	±0.03% / ◦C (0~50◦C)							
SETUP, RISE, HOLD UP TIME	800ms, 50ms, 16ms							
POWER FACTOR	PF>0.95/230VAC, PF>0.98/115VAC							
VIBRATION	10~500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES							
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC							
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:500VDC / 50M Ohms							
WORKING TEMP., HUMIDITY	-10◦C~+60◦C(REFER TO OUTPUT DERATING CURVE), 20%~90% RH							
STORAGE TEMP., HUMIDITY	-20◦C~+85◦C, 10%~95% RH							
DIMENSION	199*90*50mm (L*W*H) CASE:916B							
WEIGHT	1.1Kgs							
SAFETY STANDARDS	MEET UL1950, TUV EN60950							
EMC STANDARDS	MEET EN55022 CLASS B, EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61000-3-2,-3, EN55024							

NOTE :
1.ALL PARAMETERS ARE SPECIFIED AT 230VAC INPUT, RATED LOAD, 25°C 70% RH. AMBIENT.
2.TOLERANCE : INCLUDE SET UP TOLERANCE, LINE REGULATION, LOAD REGULATION.
3.OUTPUT PROVIDE UP TO MAXIMUM CURRENT, BUT TOTAL OUTPUT CAN NOT EXCEED MAX. OUTPUT MAXIMUM OUTPUT POWER.
4.RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR.
5.LINE REGULATION IS MEASURED FROM LOW LINE TO HIGH LINE AT RATED LOAD.
6.LOAD REGULATION IS MEASURED FROM 20% TO 100% RATED LOAD, AND OTHER OUTPUT AT 60% RATED LOAD.
7.EACH OUTPUT PROVIDE UP TO MAXIMUM CURRENT, BUT TOTAL LOAD CAN NOT EXCEED MAX. OUTPUT POWER.

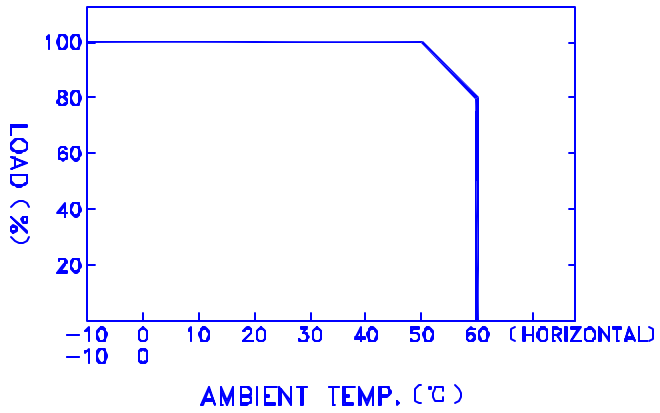
2002-08-30

QP-150 SERIES

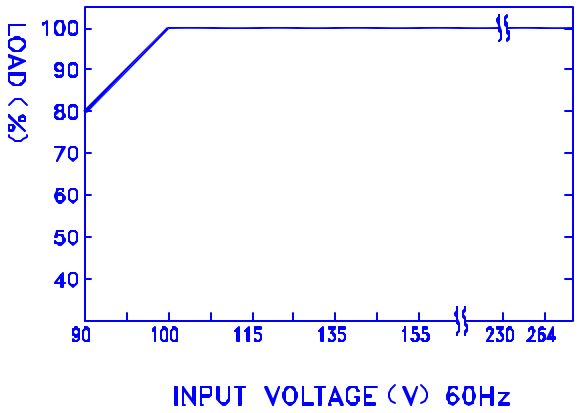
BLOCK DIAGRAM



OUTPUT DERATING VS Ta

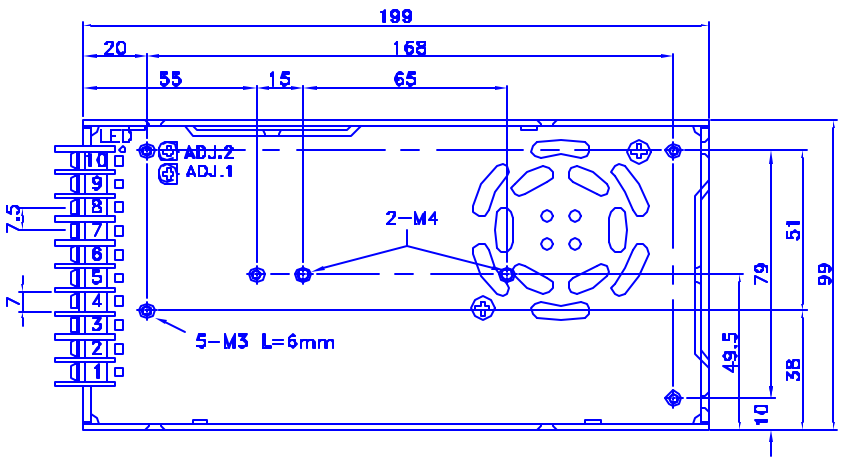


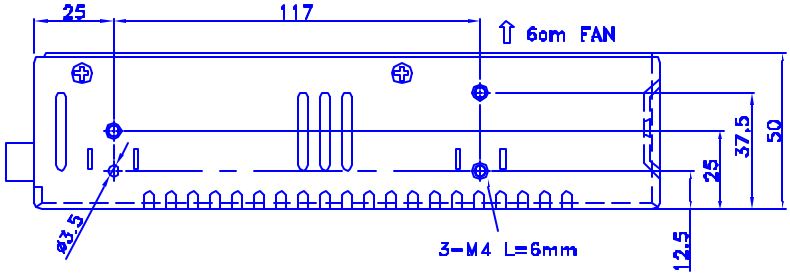
OUTPUT DERATING VS INPUT VOLTAGE



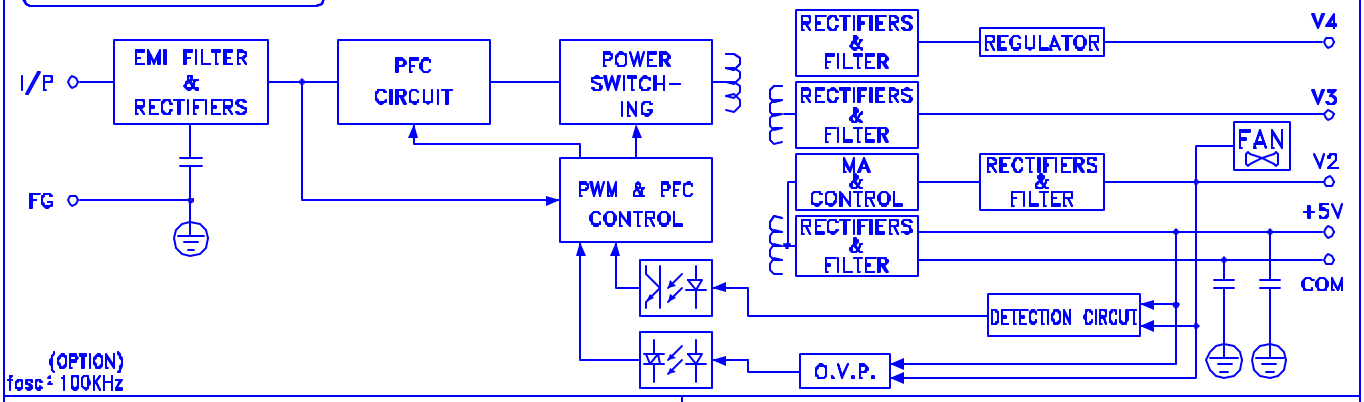
DIMENSION (mm)

- CASE : 916B
- TERMINAL PIN NO. ASSIGNMENT
  - PIN 1,2 : AC INPUT
  - PIN 3 : FG ⏚
  - PIN 4 : DC OUTPUT V4
  - PIN 5 : DC OUTPUT V3
  - PIN 6,7 : DC OUTPUT V1
  - PIN 8,9 : DC OUTPUT COM
  - PIN 10 : DC OUTPUT V2

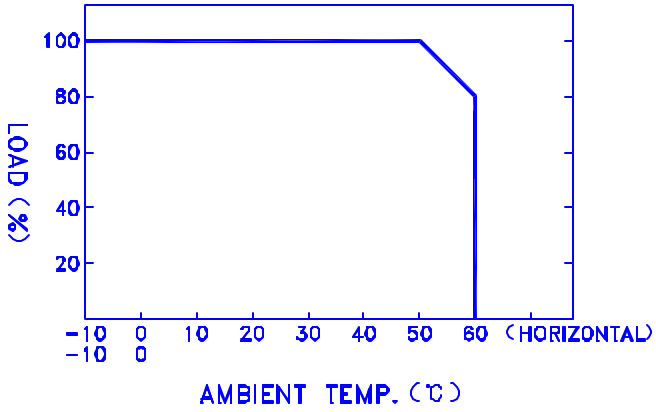




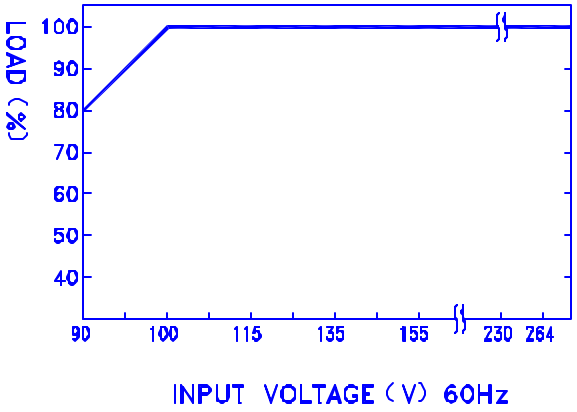
BLOCK DIAGRAM



OUTPUT DERATING VS Ta



OUTPUT DERATING VS INPUT VOLTAGE



DIMENSION (mm)

- CASE : 916B
- TERMINAL PIN NO. ASSIGNMENT
  - PIN 1,2 : AC INPUT
  - PIN 3 : FG ⏚
  - PIN 4 : DC OUTPUT V4
  - PIN 5 : DC OUTPUT V3
  - PIN 6,7 : DC OUTPUT V1
  - PIN 8,9 : DC OUTPUT COM
  - PIN 10 : DC OUTPUT V2